

Work Order ID 70500

Friday, June 10, 2011 9:45:12 AM



Page 1

Item ID: D3391-025

Accept



Setup Start



Revision ID:

Item Name: Aft Tube Assembly

Stop



Start Date: 6/10/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 6/23/2011 Req'd Qty: 1.00

Customer:

Reference:

Approvals:

Process Plan: *ME*

Date: *11-06-10*

Tooling:

Date:

Run Start



QC:

Date:

SPC.(Y/N):

Date:

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D3391

Rev H/ DEO

100

0.00



MORI SEIKI CNC LATHE LARGE

Mori Seiki

Memo

0.00

Mori Seiki CNC Lathe Large

Turn as per Folio FA599

Rev: *44* & Dwg D3391 Rev: *H*

scribe batch # on fwd end at 90 degree

mm.l 11/06/15

110

0.00



QC2- Inspect parts off machine FAI/FAIB

QC

Memo

0.00

Quality Control

mm.l 11/06/12

111

0.00



QC8- Inspect parts - second check

QC

Memo

0.00

Quality Control

SL 11/06/20

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

120

0.00



HAAS 1

HAAS CNC VERTICAL MACHINING #1

Memo

0.00

HAAS CNC vertical machine #1

1-Machine as per Folio FA 599 Rev: AA & Dwg D3391 Rev: H
2-Deburr

130

0.00



QC

QC2- Inspect parts off machine FAI/FAIB

Memo

0.00

Quality Control

140

0.00



QC

QC8- Inspect parts - second check

Memo

0.00

Quality Control

W/O:		WORK ORDER CHANGES					
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Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

150

0.00



Skidtubes

Skidtubes

Memo

0.00

Skidtubes

1-Drill (PILOT HOLE) aft cap holes per Dwg D3391 using DT8803

DP

11-6-20

160

0.00



CNC Bend 1

BENDING MACHINE - SKIDTUBES

Memo

0.00

CNC Delta 100 Bender

Form as per Dwg D3391 Using Bend Prog 3391025

DP

11-6-20

170

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

11-4-15

0.00

Quality Control

1 8E11/06/20

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

1. The first step in the process is to identify the problem or issue that needs to be addressed. This involves gathering information and understanding the context of the problem.

2. The second step is to define the objectives and goals of the project. This involves determining what you want to achieve and how you will measure success.

3. The third step is to develop a plan of action. This involves identifying the steps that need to be taken to achieve the objectives and goals.

4. The fourth step is to implement the plan. This involves putting the plan into action and monitoring progress.

5. The fifth step is to evaluate the results. This involves assessing the outcomes of the project and determining whether the objectives and goals have been achieved.

6. The sixth step is to report on the results. This involves communicating the findings of the project to the relevant stakeholders.

7. The seventh step is to review the process. This involves reflecting on the project and identifying areas for improvement.

8. The eighth step is to share the results. This involves disseminating the findings of the project to a wider audience.

9. The ninth step is to celebrate success. This involves acknowledging the achievements of the project and the team.

10. The tenth step is to learn from the experience. This involves reflecting on the project and identifying lessons learned for future projects.

Page 4

Accept

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466
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Setup Start

Stop

[illegible]

1. The first step in the process is to identify the problem or issue that needs to be addressed. This involves gathering information and understanding the context of the problem.

2. Once the problem is identified, the next step is to define the objectives and goals of the project. This helps to clarify what needs to be achieved and provides a clear direction for the team.

3. The third step is to develop a plan or strategy to address the problem. This involves breaking down the problem into smaller, manageable tasks and determining the resources needed to complete each task.

4. The fourth step is to implement the plan. This involves putting the strategy into action and monitoring progress regularly to ensure that the project is on track.

5. The final step is to evaluate the results of the project. This involves comparing the actual outcomes with the objectives and goals to determine the effectiveness of the project and identify areas for improvement.

Cust Item ID:

Customer:

Reference:

Run Start

[illegible]

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

Stop

[illegible]

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Operation Description

Set Up/ Run Hours

Tool ID

Tool #

Plan Code

Accept
Qty

Reject
QtyReject
Number

**Insp.
Stamp**

0.00

[illegible]

Skidtubes

Skidtubes

Memo

0.00

Skidtubes

1-Open Aft cap pilot hole to .208" as per Dwg D3391

2-Drill float bag holes using DT8809 as per Dwg D3391(Holes marked "A" Only.

3-Drill wearplate holes as per Dwg D3391 using DT8878(Mid Tube) & DT8217 Wearplate Jig .

*****Do Not Open To Finished Size*****

4-Drill Wearshoe holes as per DWG D3391 using DT8939 locating from 2 previously drilled aft wearplate holes.

5-Open wearplate holes to 0.250" and c'bore as per dwg D3391

6-Open up all wearshoe , wearplate to 0.297"and float bag holes to 0.328" as per Dwg D3391.

7-Deburr

Wh 11/06/21

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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NOTE: Date & initial all entries

Work Order ID 70500

Friday, June 10, 2011 9:45:12 AM



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Item ID: D3391-025

Accept



Setup Start



Revision ID:

Stop



Item Name: Aft Tube Assembly

Start Date: 6/10/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 6/23/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

190

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

8 w/6/21

①

200

Chemical Conversion Coat per QSI005 4.1

0.00



HandFinish

Memo

0.00

Hand Finishing

DH
11/06/21

210

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

Quality Control

1 0 BE 11/06/21

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Work Order ID 70500

Friday, June 10, 2011 9:45:12 AM



Item ID:	D3391-025	Accept		Setup	Start	
Revision ID:					Stop	
Item Name:	Aft Tube Assembly					
Start Date:	6/10/2011	Start Qty:	1.00		Cust Item ID:	
Required Date:	6/23/2011	Req'd Qty:	1.00		Customer:	
Reference:						

Approvals:	Process Plan:	Date:	Tooling:	Date:	Run	Start	
	QC:	Date:	SPC (Y/N):	Date:		Stop	

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
220		0.00							
	Skidtubes								
Skidtubes	Memo	0.00							
Skidtubes	Instal spacers as per dwg D3391 A/R Magnabond 6398 Batch: <u>M116677</u> exp. date: <u>6/1/08</u> cure time 12hrs as per QSI0015								<i>BB</i> <i>11/06/22</i>
230		0.00							
	QC5- Inspect part completeness to step on W/O	0.00							
QC	Memo	0.00							<i>8/11/04/12</i> <i>(TU)</i>
Quality Control									
235		0.00							
	Pressure Wash per QSI005 4.3	0.00							
HandFinish	Memo	0.00							<i>1</i> <i>PR 11-6-22</i>
Hand Finishing	AND REALODINE AS PER PAR09-043								

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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Work Order ID 70500

Friday, June 10, 2011 9:45:12 AM



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Item ID: D3391-025

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Cust Item ID:

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Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start



Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

240

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00



Powdercoat

Powder Coating

250

QC3- Inspect Part Finish

0.00



QC

Quality Control

Memo

START TIME:

OVEN TEMPERATURE:

FINISH TIME:

0.00

0.00

Memo

260

HandFinishing

0.00



HandFinish

Hand Finishing

Memo

1-Install inserts as per Dwg D3391

2-Install Aft Cap as per Dwg D3391

A/R Sikaflex-241/-291 1117516

Sikaflex expiry date: 01/13

0.00

120 M-14/06/22

1 0 14/06/22

1 0 14/06/22

W/O:		WORK ORDER CHANGES					
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Start Date: 6/10/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 6/23/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

270

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

8 uloc/22

280

Identify as per dwg & Stock Location

0.00



Packaging

Memo

0.00

Packaging

D412-712-043/B70181

1 0 uloc/22

290

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

11/6/22

MK 11-06-22

W/O:		WORK ORDER CHANGES					
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Friday, June 10, 2011 9:45:05 AM

Page 1

Work Order ID: 70500

Parent Item: D3391-025

Parent Item Name: Aft Tube Assembly



Start Date: 6/10/2011

Required Date: 6/23/2011

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev B 06-02-07 ECN773 dwg rev. D EC
 IPP Rev:C 06-03-28 Update Manuf. Instructions JLM ☐ ☐ ☐
 IPP rev D 07.03.20 revF dwg EC
 IPP rev E 07.11.07 rev G dwg ecn 1053p EC verified by: DD
 IPP Rev:F 07-11-13 ECN 1056 DD verified by: EC
 IPP Rev:G 08-09-10 revH as per dwg DD verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin \ Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D6014-090 ALUMINUM EXTRUSION		Manufactured	No			100	Each	3.0000	1	1			
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				LG				3					
				(56572)				3					
D3670-4-200 SPACER		Manufactured	No			230	Each	35.0000	4	4			
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				LG				35					
				(68950)				35					
D2646 Aft Cap		Manufactured	No			270	Each	24.0000	1	1			
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				FP006				23					
				(62678)				23					
				FP-4				1					
				69019				1					

mm, L 11/06/15

Wh.

11/06/21

4

11/06/22

X1

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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Picklist Print

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Work Order ID: 70500

Parent Item: D3391-025

Parent Item Name: Aft Tube Assembly

Start Date: 6/10/2011

Required Date: 6/23/2011

Start Qty: 1.00

Required Qty: 1.00

D3537-1

Manufactured No

270 Each

56.0000

1

1



Wearpad



xl 11/06/22

Location

Loc Qty

Loc Code

FP017

56

B69278

xl

69817

56

D3537-7

Manufactured No

270 Each

1.0000

1

1



Wearpad



xl 11/06/22

Location

Loc Qty

Loc Code

FP017

1

B69320

xl

65146

1

D3553-1

Manufactured No

270 Each

13.0000

1

1



Gasket



xl 11/06/22

Location

Loc Qty

Loc Code

FP013

13

xl

56568

13

D3553-3

Manufactured No

270 Each

37.0000

1

1



Gasket



xl 11/06/22

Location

Loc Qty

Loc Code

FP

20

31631

20

FP013

17

53480

17

xl

Friday, June 10, 2011 9:45:06 AM

Shop Packet Print

Page 2

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Friday, June 10, 2011 9:45:06 AM

Page 3

Work Order ID: 70500



Parent Item: D3391-025



Parent Item Name: Aft Tube Assembly

Start Date: 6/10/2011

Required Date: 6/23/2011

Start Qty: 1.00

Required Qty: 1.00

D3672-1

Manufactured No

270

Each

1,176.000

2

2



Phenolic Washer



u106/22

LocationLoc QtyLoc Code

ST074

1150

64177

650

66821

500

ST077

26

52505

26

x2

ALS4-1032-130

Purchased

No

260

Each

1,672.000

14

14



Insert



u106/22

LocationLoc QtyLoc Code

ST281

8

117331

8

ST282

1664

117717

1664

x14

ALS4-1032-225

Purchased

No

270

Each

1,249.000

12

12



Insert



u106/22

LocationLoc QtyLoc Code

ST282

1249

110768

449

117717

800

x12

Friday, June 10, 2011 9:45:06 AM

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Page 3

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Friday, June 10, 2011 9:45:06 AM

Page 4

Work Order ID: 70500

Parent Item: D3391-025

Parent Item Name: Aft Tube Assembly

Start Date: 6/10/2011

Required Date: 6/23/2011

Start Qty: 1.00

Required Qty: 1.00

AN3C4A

Purchased

No

270

Each

1,957.000

6

6



BOLT



1106122

Location

Loc Qty

Loc Code

ST350

1957

117094

455

117313

2

117688

800

117795

500

117872

200

x6

AN3C5A

Purchased

No

270

Each

1,763.000

4

4



Bolt



1106122

Location

Loc Qty

Loc Code

FP-A

7

115835

7

ST350

1756

116419

102

116549

54

117343

500

117508

300

117764

300

117872

500

x4

AN960C10L

NAS1149C0332

Purchased

No

270

Each

0.0000

10

10



washer

1117887



(x10) 1106122

Friday, June 10, 2011 9:45:06 AM

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Page 4

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order:	70500
Description: Float Skidtube (412)		Part Number:	D3391-3
Inspection Dwg: D3391	Rev: H	Page 1 of 1	

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Lathe Section						
14.000	+/-0.010	14.000	✓		tape	MML-02
3.500	+/-0.010	3.506	✓		vern	JF-01
88.93	+/-0.030	88.900	✓		tape	NML-02
44.995	+/-0.030	44.995	✓		tape	MML-02
Ø3.200	+/-0.010	3.190	✓		micr	CNC-04
88.93	+/-0.030	88.900	✓		tape	MML-02
Ø3.750	+/-0.010	3.750	✓		micr	CNC-04
30° x 160° Ø60 chamfer	+/-0.010	30° x Ø60	✓		"	"

Measured by: MML / CMF

Date: 11/06/15

Audited by: JL

Date: 11/06/20

HAAS Section						
1.526	+0.000/-0.030	1.570	—		Vern HL-7	
7.500	+/-0.010	7.500	—		"	
27.750	+/-0.010	27.750	—		M-tape HL-2	
31.750	+/-0.010	31.750	—		"	
35.250	+/-0.010	35.250	—		"	
3.300	+/-0.010	3.290	—		Vern HL-7	
0.200	+/-0.010	.197	—		"	
3.520	+/-0.010	3.521	✓		Micro RQ-07	
0.687	+0.010/-0.000	.688	—		"	
R0.062	+/-0.010	R.062	—		R-L	
Ø0.484	+0.005/-0.001	Ø.486	—		Vern HL-7	

Measured by: CMF

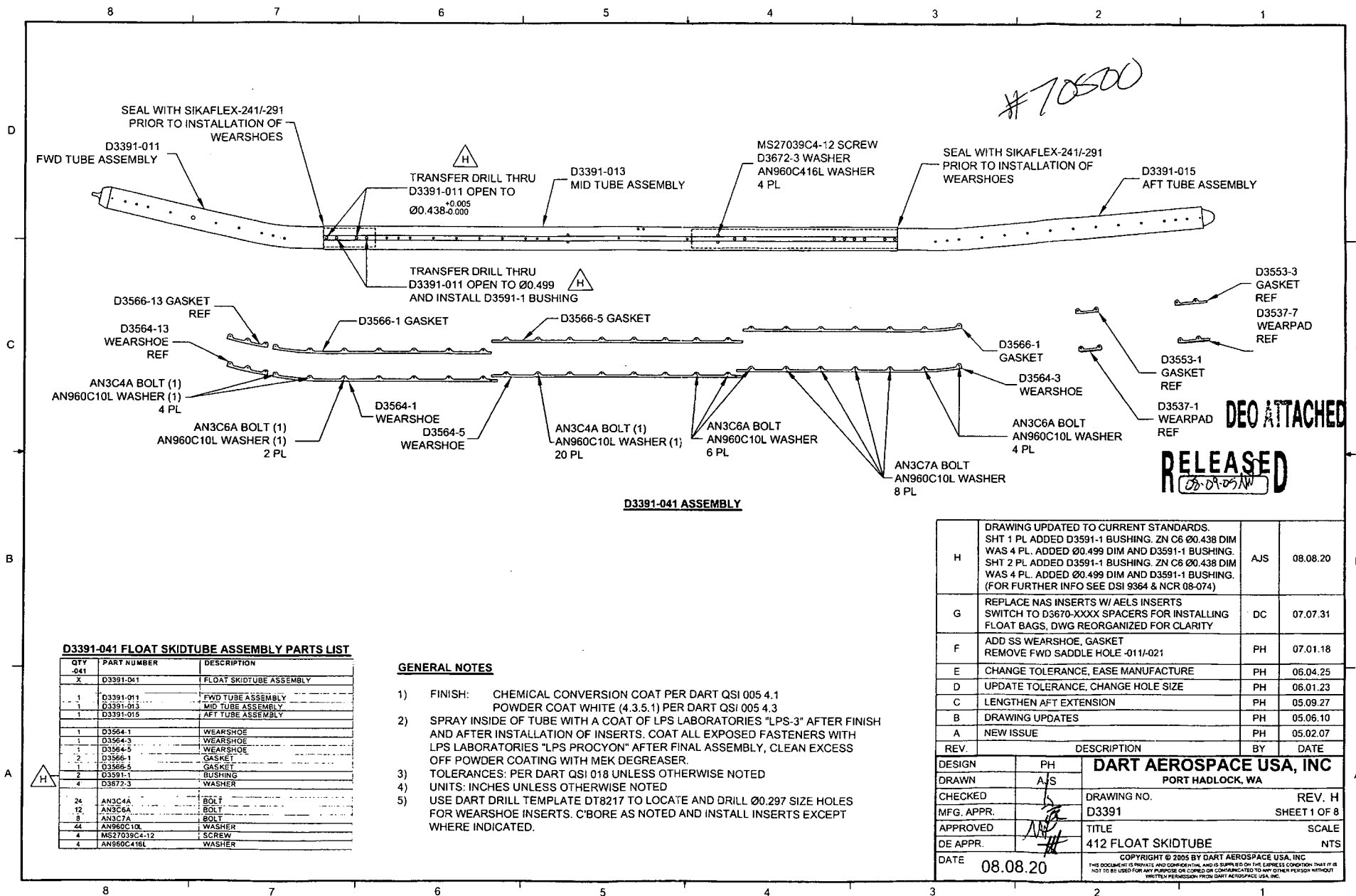
Date: 11/06/17

Audited by: JL

Date: 11/06/20

Rev	Date	Change	Revised by	Approved
A	06.04.24	New Issue P/O D3391-015/-025	KJ/JLM	
B	06.06.19	Dwg revision update	KJ/JLM	
C	07.04.20	Ø0.208 dimension removed	KJ/JLM	
D	07.09.06	0.400 dimension removed	KJ/JLM	
E	07.11.23	Dwg Rev. updated	KJ/EC/DD	
F	09.04.27	Dimensions updated per Rev H and NCR09-028	KJ/JLM	
G	09.11.16	Dimension 0.200 removed	KJ	





Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

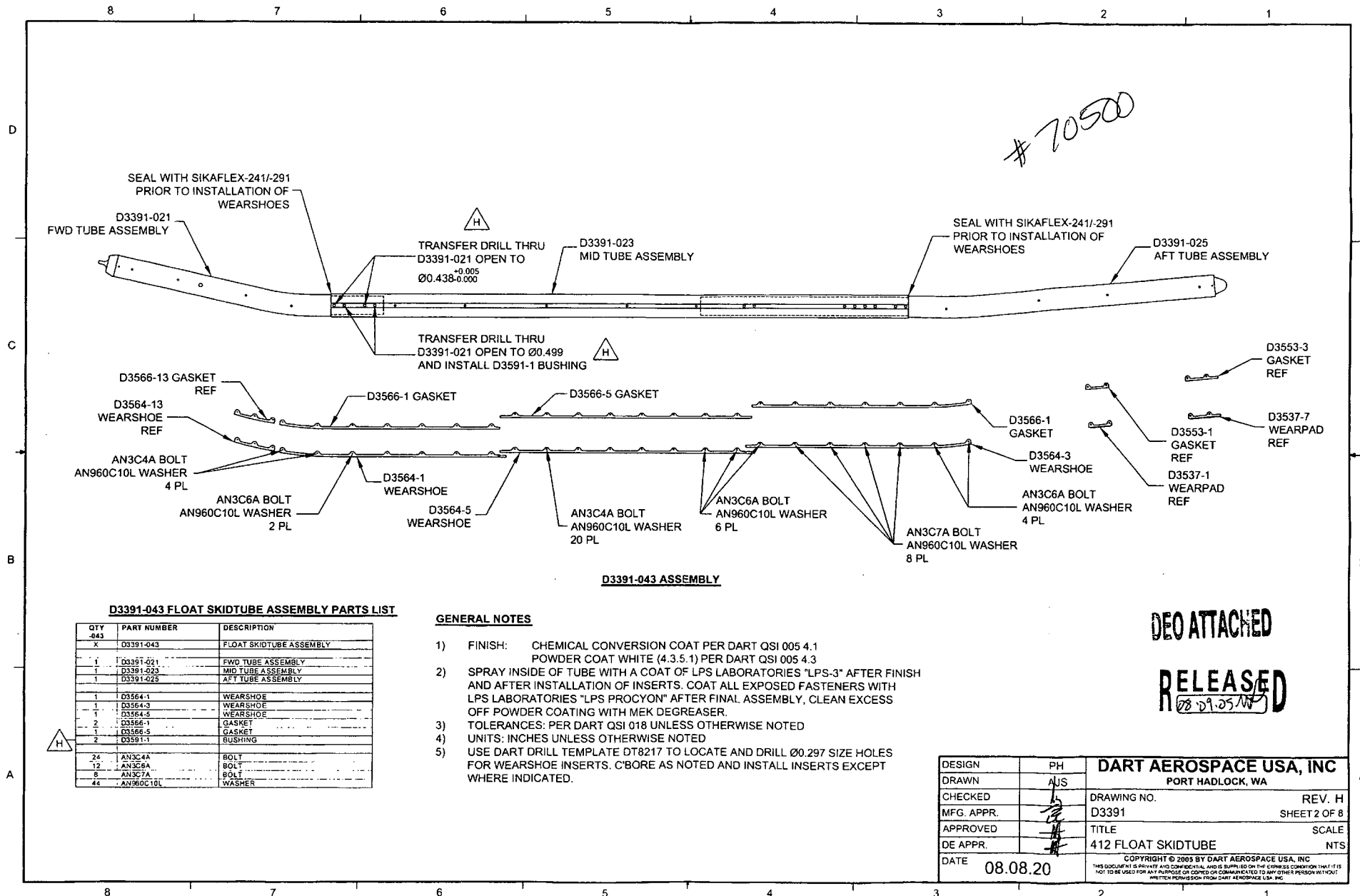
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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

#70500



D3391-043 ASSEMBLY

D3391-043 FLOAT SKIDTUBE ASSEMBLY PARTS LIST

QTY	PART NUMBER	DESCRIPTION
X	D3391-043	FLOAT SKIDTUBE ASSEMBLY
1	D3391-021	FWD TUBE ASSEMBLY
1	D3391-023	MID TUBE ASSEMBLY
1	D3391-025	AFT TUBE ASSEMBLY
1	D3564-1	WEARSHOE
1	D3564-3	WEARSHOE
1	D3564-5	WEARSHOE
2	D3566-1	GASKET
1	D3566-5	GASKET
2	D3591-1	BUSHING
24	AN3C4A	BOLT
12	AN3C6A	BOLT
8	AN3C7A	BOLT
44	AN960C10L	WASHER

GENERAL NOTES

- 1) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
- 2) SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND AFTER INSTALLATION OF INSERTS. COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) USE DART DRILL TEMPLATE DT8217 TO LOCATE AND DRILL 0.297 SIZE HOLES FOR WEARSHOE INSERTS. C-BORE AS NOTED AND INSTALL INSERTS EXCEPT WHERE INDICATED.

DEO ATTACHED

RELEASED
03-09-25/10

DESIGN	PH	DART AEROSPACE USA, INC	
DRAWN	AJS	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. H
MFG. APPR.		D3391	SHEET 2 OF 8
APPROVED		TITLE	SCALE
DE APPR.		412 FLOAT SKIDTUBE	NTS
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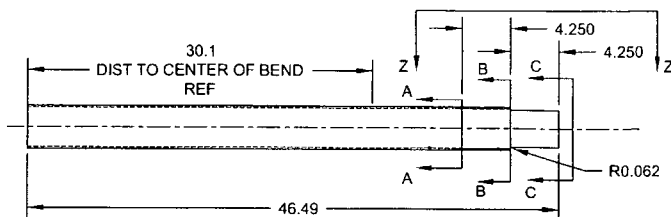
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

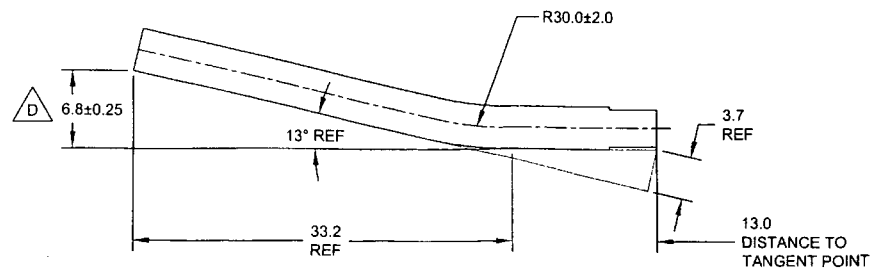
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NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

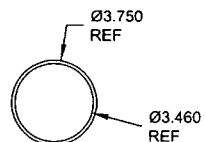
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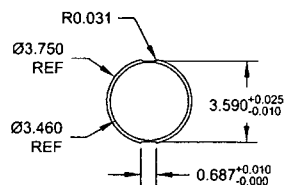
D3391-1 CUTTING DETAIL
(MAKE FROM D6013-047 SKIDTUBE MATERIAL)



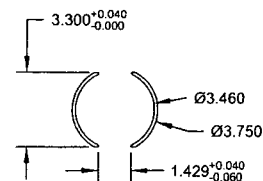
D3391-011/-021 BENDING DETAIL
(MAKE FROM D3391-1)



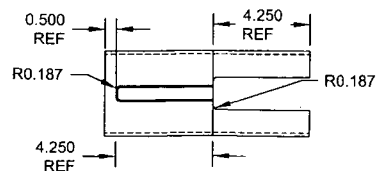
SECTION A-A
SCALE 2X



SECTION B-B
SCALE 2X



SECTION C-C
SCALE 2X



VIEW Z-Z
SCALE 2X

DEO ATTACHED
RELEASED
28 JAN 05 NW

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DRAWN	AJS	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. H
MFG. APPR.		D3391	SHEET 3 OF 8
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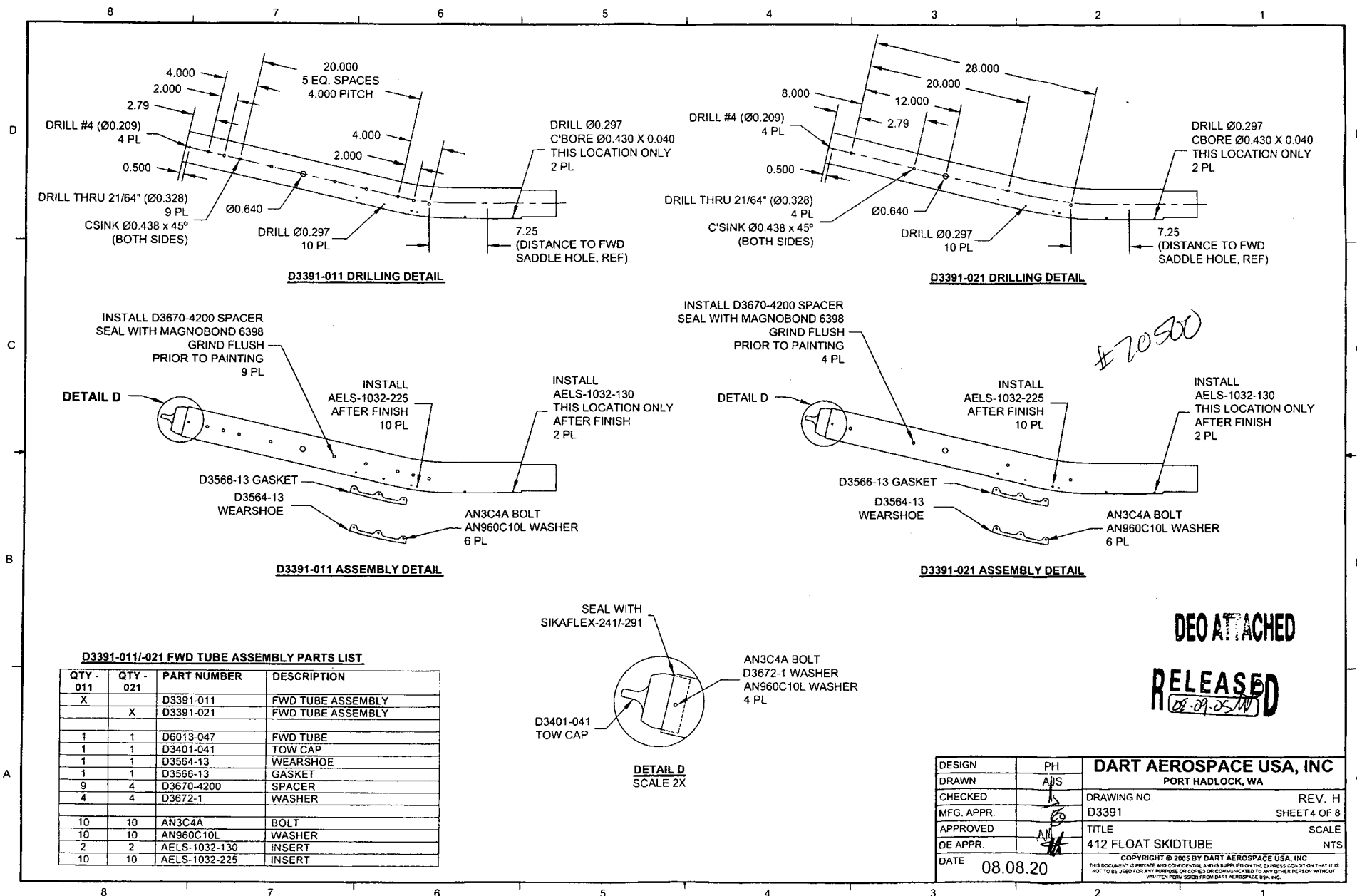
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



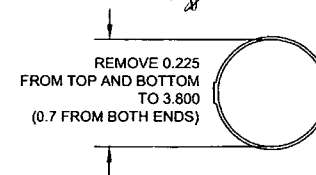
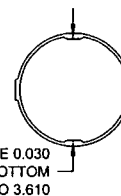
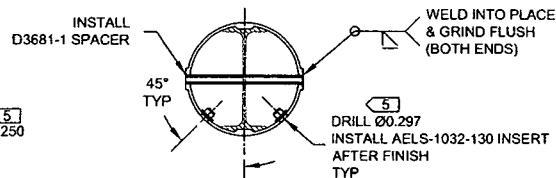
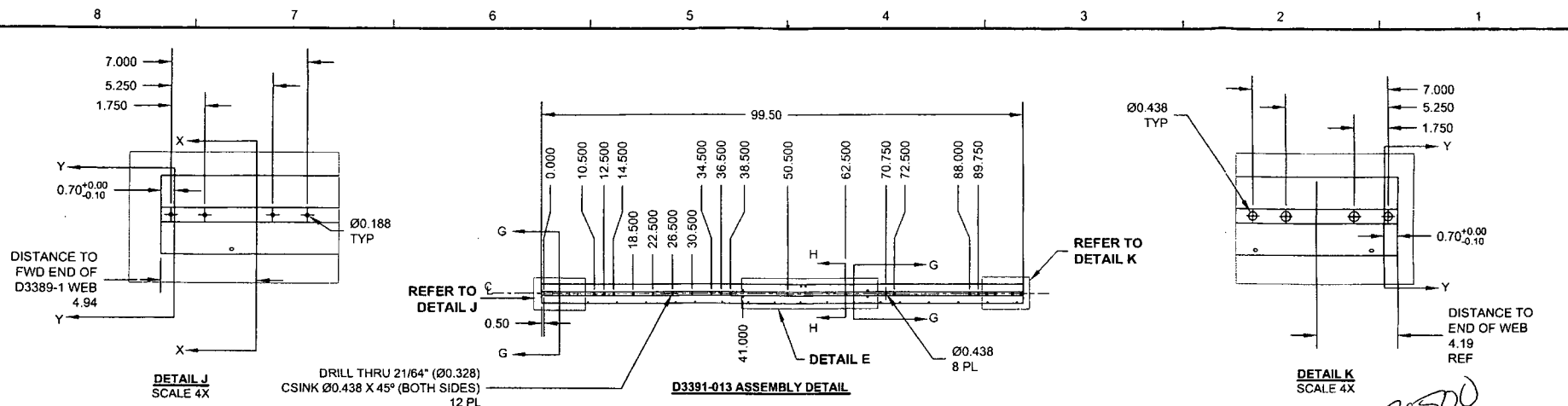
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

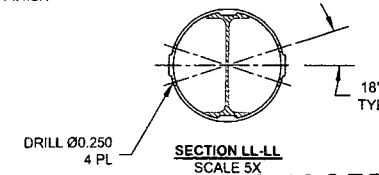
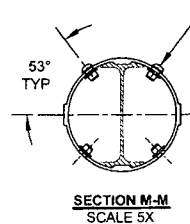
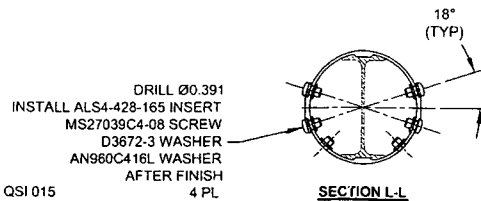
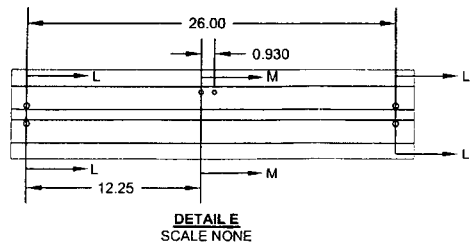


D3391-013 MID TUBE ASSEMBLY PARTS LIST

QTY	PART NUMBER	DESCRIPTION
-013		
X	D3391-013	MID TUBE ASSEMBLY
1	D2500-1-100	EXTRUSION
1	D3389-1	WEB
4	D3672-1	WASHER
4	D3672-3	WASHER
12	D3681-1	SPACER
24	AELS-1032-130	INSERT
4	ALS4-428-165	INSERT
4	AN960C10L	WASHER
4	AN960C416L	WASHER
4	MS27039C1-09	SCREW
4	MS27039C4-08	SCREW

D3391-013 MID TUBE ASSEMBLY

- MATERIAL: MAKE FROM D2500-1-100 EXTRUSION
- INSTALL D3389-1 WEB TO OUTER TUBE USING SIKAFLEX-241/291 PER QSI 015
- WELDING: PER DART QSI 004



DEO ATTACHED

RELEASED

DESIGN	PH	DART AEROSPACE USA, INC	
DRAWN	AJS	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. H
MFG. APPR.		D3391	SHEET 5 OF 8
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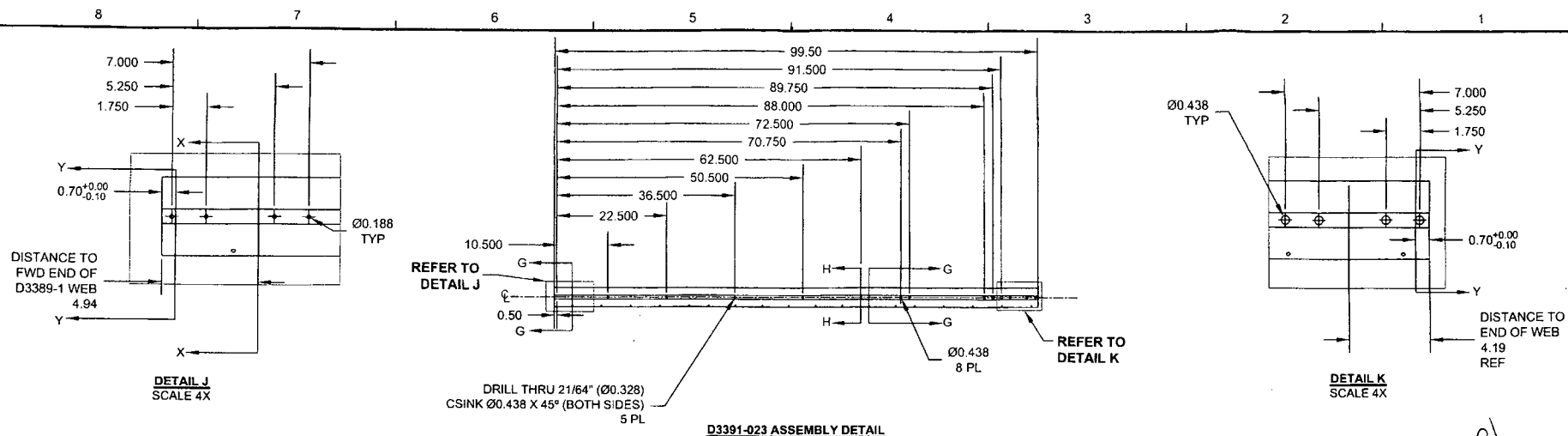
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

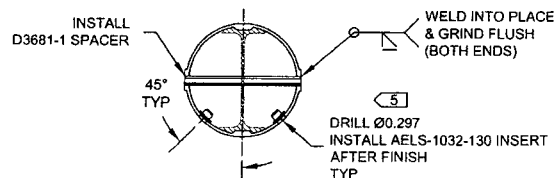
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

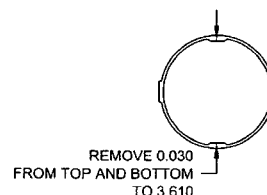
NOTE: Date & initial all entries



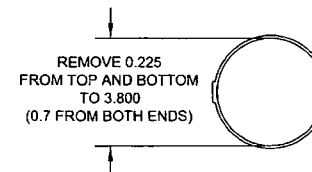
SECTION G-G
SCALE 5X



SECTION H-H
SCALE 5X



SECTION X-X
SCALE 5X







SECTION Y-Y
SCALE 5X

D3391-023 MID TUBE ASSEMBLY PARTS LIST

QTY -	PART NUMBER	DESCRIPTION
023		
X	D3391-023	MID TUBE ASSEMBLY
1	D2500-1-100	EXTRUSION
1	D3389-1	WEB
5	D3681-1	SPACER
20	AELS-1032-130	INSERT

D3391-023 MID TUBE ASSEMBLY

- 1) MATERIAL: MAKE FROM D2500-1-100 EXTRUSION
- 2) INSTALL D3389-1 WEB TO OUTER TUBE USING SIKAFLEX-241/-291 PER QSI 015
- 3) WELDING: PER DART QSI 004

DESIGN	PH	DART AEROSPACE USA, INC	
DRAWN	AS	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. H
MFG. APPR.		D3391	SHEET 6 OF 8
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08-08-20

70500

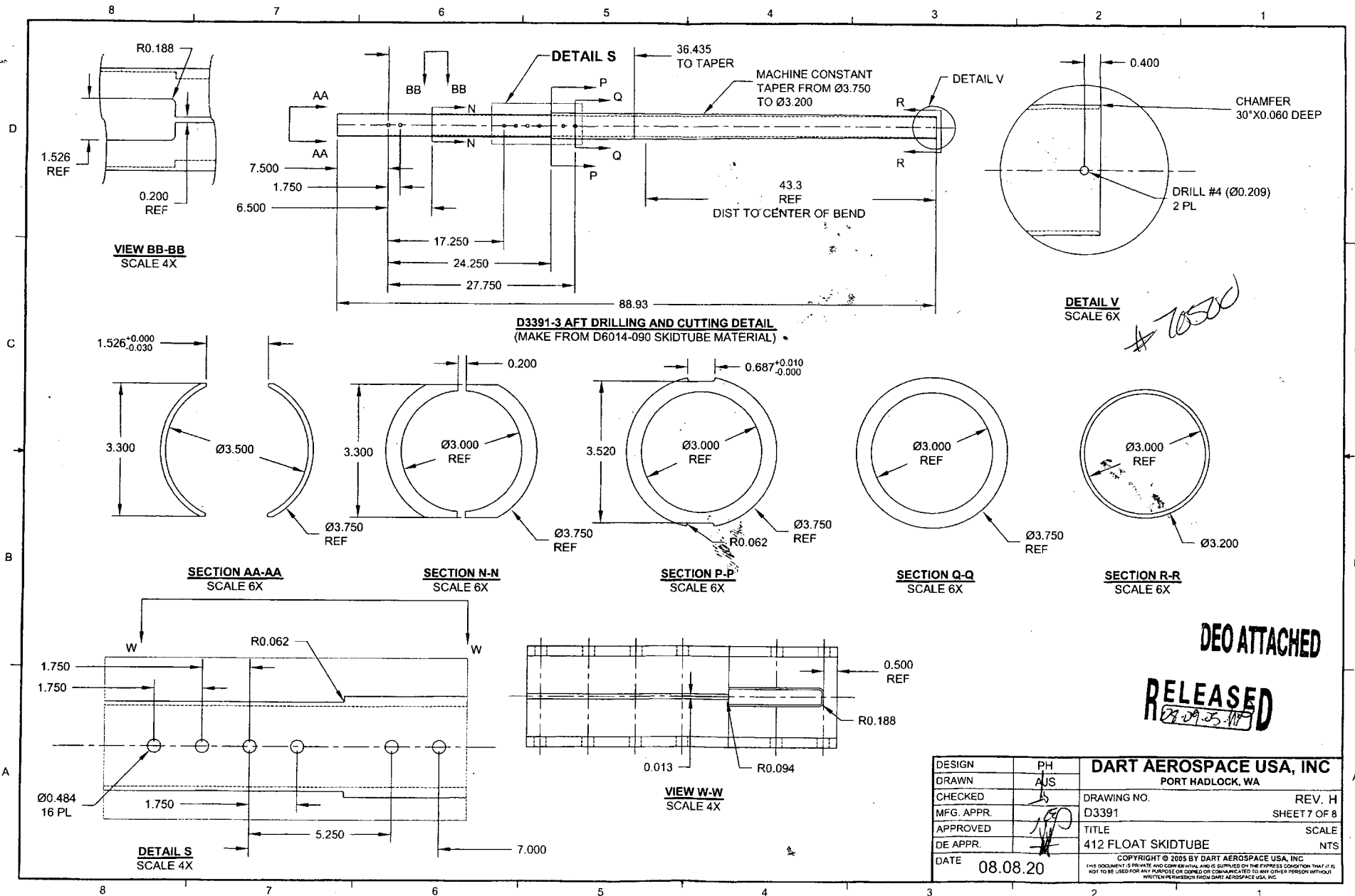
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



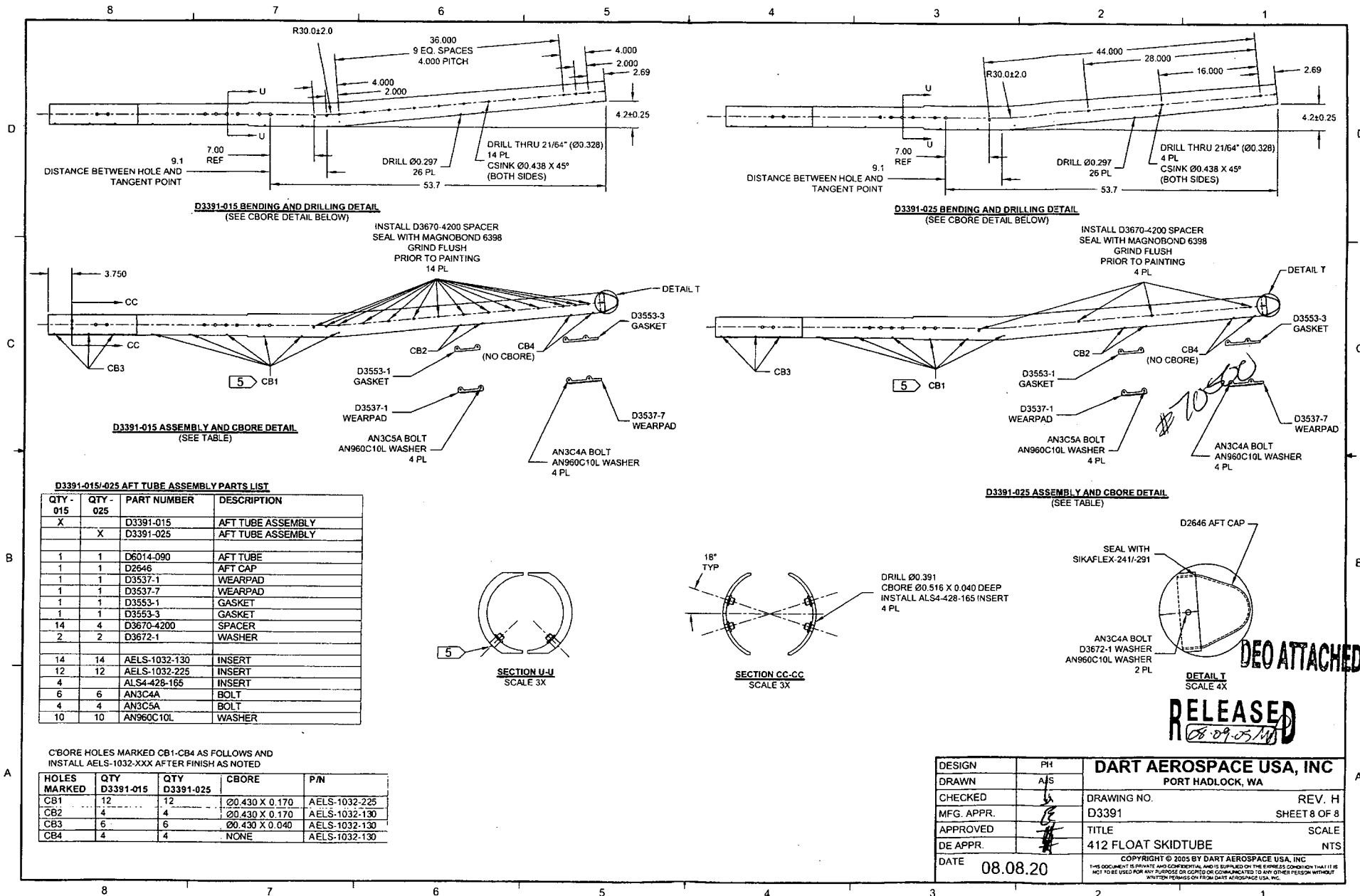
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DRAWING NO. D3391	TITLE 412 FLOAT SKIDTUBE	REV. H	DART AEROSPACE USA, INC ENGINEERING ORDER		D.E.O. NO. D3391-H-1	SHEET NO. SHEET 1 OF 1	SCALE NTS
DRAWN <i>UP</i>	CHECKED <i>L</i>	MFG. APPR. <i>AS</i>	APPROVED <i>MP</i>		DE APPR. <i>MP</i>		
DATE 09.09.23	DATE 04.04.24	DATE 09/09/25	DATE 09/09/30		DATE 09/09/30		

PURPOSE:

LPS-3 IS NO LONGER USED DURING ASSEMBLY OF D3391-041/-043 SKIDTUBES.

CHANGE:

AMEND NOTE 2 OF D3391-041/-043 SKIDTUBE ASSEMBLIES (ZN A6-1, A6-2) AS FOLLOWS:

- 2) ~~SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH~~
~~AND AFTER INSTALLATION OF INSERTS. COAT ALL EXPOSED FASTENERS WITH~~
 LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS
 OFF POWDER COATING WITH MEK DEGREASER.

RELEASED
 2010-02-02

MP

#20550

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries